

IN THE CLAIMS

Claims 1-33 (Canceled)

Claim 34 (Currently Amended): An isolated polynucleotide that encodes a polypeptide which has methylene tetrahydrofolate reductase activity, wherein said polypeptide is at least 90% identical to ~~a fragment of SEQ ID NO: 2 which has methylene tetrahydrofolate reductase activity.~~

Claim 35 (Canceled)

Claim 36 (Currently Amended): The isolated polynucleotide of Claim 34 which encodes a polypeptide which is at least 95% identical to ~~a fragment of the amino acid sequence of SEQ ID NO: 2 that encodes a polypeptide having methylene tetrahydrofolate reductase activity.~~

Claim 37 (Previously Presented): The isolated polynucleotide of Claim 34 which comprises SEQ ID NO: 1.

Claim 38 (Currently Amended): The isolated polynucleotide of Claim 34, which comprises a fragment of SEQ ID NO: 1 that encodes a polypeptide that has methylene tetrahydrofolate reductase activity.

Claim 39 (Currently Amended): The isolated polynucleotide of Claim 34, which comprises SEQ ID NO: 1 downstream of at least one regulatory region, expression cassette, promoter and/or ribosome binding site.

Claim 40 (Previously Presented): The isolated polynucleotide of Claim 34 which is RNA.

Claim 41 (Previously Presented): The isolated polynucleotide of Claim 34 which is DNA.

Claim 42 (Previously Presented): The isolated polynucleotide of Claim 34, which is capable of replication.

Claim 43 (Previously Presented): The isolated polynucleotide of Claim 34, which is capable of replication in a coryneform bacterium.

Claim 44 (Previously Presented): A vector comprising the isolated polynucleotide of Claim 34.

Claim 45 (Previously Presented): A vector comprising the isolated polynucleotide of Claim 37.

Claim 46 (Previously Presented): A host cell transformed with nucleic acid comprising the isolated polynucleotide of Claim 34.

Claim 47 (Previously Presented): The host cell of Claim 46, which is a coryneform bacterium.

Claim 48 (Previously Presented): The host cell of Claim 46 which is  
*Corynebacterium glutamicum*.

Claim 49 (Previously Presented): A host cell transformed with nucleic acid  
comprising the isolated polynucleotide of Claim 37.

Claim 50 (Previously Presented): A host cell transformed with nucleic acid  
comprising multiple copies of the isolated polynucleotide of Claim 34.

Claim 51 (Previously Presented): A method for making a polypeptide having  
methylene tetrahydrofolate reductase activity comprising expressing the isolated  
polynucleotide of Claim 34.

Claim 52 (Previously Presented): The method of Claim 51, further comprising  
expressing said isolated polynucleotide under conditions which prolong the life of m-RNA,  
or under conditions which prevent the degradation of methylene tetrahydrofolate reductase.

Claim 53 (Previously Presented): An isolated polynucleotide which is fully  
complementary to the isolated polynucleotide of Claim 34.

Claim 54 (Currently Amended): An isolated polynucleotide consisting of a fragment  
of SEQ ID NO. 1 consisting of at least 15 consecutive nucleotides of SEQ ID ~~No~~ NO: 1.

Claim 55 (Previously Presented): The isolated polynucleotide of Claim 34,

further comprising a regulatory region, expression cassette, promoter and/or ribosome binding site upstream of said isolated polynucleotide which encodes a polypeptide having methylene tetrahydrofolate reductase activity.

Claim 56 (Previously Presented): An isolated polynucleotide that encodes a polypeptide having methylene tetrahydrofolate reductase activity and which comprises SEQ ID NO: 1 or a fragment of SEQ ID NO: 1, wherein said fragment of SEQ ID NO: 1 encodes a polypeptide having methylene tetrahydrofolate reductase activity.

Claim 57 (Previously Presented): A vector comprising the isolated polynucleotide of Claim 56.

Claim 58 (Previously Presented): A host cell comprising the isolated polynucleotide of Claim 56.

Claim 59 (Currently Amended): An isolated polynucleotide comprising a polynucleotide which is

- (a) SEQ ID NO: 1 or a fragment of SEQ ID NO: 1, ~~that~~ wherein said fragment encodes a polypeptide having the enzymatic activity of methylene tetrahydrofolate reductase; or
- (b) a polynucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO: 1 and which sequence encodes a protein having the enzymatic activity of methylene tetrahydrofolate reductase.

Claim 60 (Previously Presented): A vector comprising the isolated polynucleotide of Claim 59.

Claim 61 (Previously Presented): A host cell comprising the isolated polynucleotide of Claim 59.

Claim 62 (Previously Presented): A method for making a polypeptide having methylene tetrahydrofolate reductase activity comprising expressing the isolated polynucleotide of Claim 59.

Claim 63 (Previously Presented): A process for the fermentative preparation of an L-amino acid, comprising:

culturing the host cell of Claim 46 in a medium suitable for the production of an L-amino acid, and

recovering the L-amino acid.

Claim 64 (Previously Presented): The process of Claim 63, wherein said L-amino acid is methionine.

Claim 65 (Previously Presented): The process of Claim 63, wherein said host cell is a coryneform bacterium.

Claim 66 (Previously Presented): The process of Claim 63, wherein said host cell is selected from the group consisting of *Corynebacterium glutamicum*, *Corynebacterium acetoglutamicum*, *Corynebacterium acetoacidophilum*, *Corynebacterium thermoaminogenes*,

*Corynebacterium melassecola*, *Brevibacterium flavum*, *Brevibacterium lactofermentum* and *Brevibacterium divaricatum*.

Claim 67 (Previously Presented): The process of Claim 63, wherein said host cell is *Corynebacterium glutamicum*.

Claim 68 (Previously Presented): The process of Claim 63, wherein said host cell is *Corynebacterium glutamicum* strain ATCC13032/pCREmetF.

Claim 69 (Previously Presented): The process of Claim 63, wherein said host cell has at least one metabolic pathway which decreases the production of the desired L-amino acid eliminated or reduced.

Claim 70 (Currently Amended): The process of Claim ~~[[64]]~~ 63, wherein said host cell comprises an elimination or attenuation of at least one gene selected from the group consisting of:

- the thrB gene which codes for homoserine kinase,
- the ilvA gene which codes for threonine dehydratase,
- the thrC gene which codes for threonine synthase,
- the ddh gene which codes for meso-diaminopimelate D-dehydrogenase,
- the pck gene which codes for phosphoenol pyruvate carboxykinase,
- the pgi gene which codes for glucose 6-phosphate isomerase, and
- the poxB gene which codes for pyruvate oxidase.

Claim 71 (Previously Presented): The process of Claim 63, wherein said host cell has at least one gene in the metabolic pathway which produces the desired L-amino acid enhanced.

Claim 72 (Currently Amended): The process of Claim ~~[[64]]~~ 63, wherein said host cell has the expression of at least one of the following genes increased:

the lysC gene which codes for a feed back resistant aspartate kinase,  
the gap gene which codes for glycerolaldehyde 3-phosphate dehydrogenase,  
the pgk gene which codes for 3-phosphoglycerate kinase,  
the pyc gene which codes for pyruvate carboxylase,  
the tpi gene which codes for triose phosphate isomerase,  
the metA gene which codes for homoserine O-acetyltransferase,  
the metB gene which codes for cystathionine gamma-synthase,  
the aecD gene which codes for cystathionine gamma-lyase,  
the glyA gene which codes for serine hydroxymethyltransferase, or  
the metY gene which codes for O-acetylhomoserine sulfhydrylase.

Claim 73 (Currently Amended): A process for preparing an L-methionine-containing product, comprising:

- a) culturing the host cell of Claim ~~[[45]]~~ 46 in a medium suitable for the production of the desired L-amino acid to produce an L-methionine-containing fermentation broth;
- b) removing water from the L-methionine-containing fermentation broth (concentration); and/or

- c) removing an amount of 0 to 100 wt.% of the biomass formed during the fermentation; and
- d) optionally drying the fermentation broth obtained according to b) and/or c) to form a powder or granule.

Claim 74 (Previously Presented): The process of Claim 73, further comprising at least one of the following steps:

- e) addition of one or more organic substance(s), including L-methionine and/or D-methionine and/or the racemic mixture D,L-methionine, to the products obtained according to b), c) and/or d);
- f) addition of one or more auxiliary substance(s) selected from the group consisting of silicas, silicates, stearates, grits and bran to the substances obtained according to b) to e) for stabilization and to increase storability; or
- g) conversion of the substances obtained according to b) to f) into a form stable in rumen, by coating them with one or more film-forming agent(s).

Claim 75 (Previously Presented): The process of Claim 73, wherein a portion of the biomass is removed.

Claim 76 (Previously Presented): The process of Claim 73, wherein essentially 100% of the biomass is removed from the broth.

Claim 77 (Previously Presented): The process of Claim 73, wherein the water content of the resulting product is up to 5 wt.%.



Claim 78 (Previously Presented): The process of Claim 73, wherein the water content of the resulting product is less than 2 wt.%.

Claim 79 (Previously Presented): The process of Claim 73, wherein the at least one film-forming agent is selected from the group consisting of metal carbonates, silicas, silicates, alginates, stearates, starches, gums and cellulose ethers.

Claim 80 (Previously Presented): A process for the fermentative preparation of an L-amino acid, comprising:

culturing the host cell of Claim 49 in a medium suitable for the production of an L-amino acid, and

recovering the L-amino acid.

Claim 81 (Previously Presented): A process for the fermentative preparation of an L-amino acid, comprising:

culturing the host cell of Claim 50 in a medium suitable for the production of an L-amino acid, and

recovering the L-amino acid.